

REMARKS

After entry of this amendment, claims 1-4, 8-10, and 12-24 are pending in the Application. Claim 1 has been amended herein to more particularly point out and distinctly claim Applicant's invention. The amendment to claim 1 does not raise the issue of new matter and will not require further research. Reconsideration of the Application as amended is respectfully requested.

Claims 1-3, 17, and 20-24 stand rejected under 35 USC § 103(a) as being unpatentable over Lutz (DE 38 15 990). Claim 1 has been amended to more particularly point out and distinctly claim that the apertures located in the sides of the assembled member for receiving the ends of the tubular members open to a common through channel. It is respectfully submitted that Lutz does not anticipate, teach, or suggest Applicant's claimed invention. Lutz discloses a corner member (1) formed by assembling a lower and upper clamp member (5,6). The assembled clamp members form two independent cavities for receiving ends of frame rail (3). The two cavities are separated by a wall formed between the end of the cavity oriented parallel to the longitudinal axis (extending front to rear of the dolly) of the corner member and a side of the cavity oriented parallel to the horizontal axis (i.e., perpendicular to the longitudinal axis of the corner member) of the corner member. The wall separating the two passages can be seen through the opening of the horizontal passage of the left and right front corner members (see Lutz, Figure 1). Since the wall between the two cavities seals off the end of the longitudinal cavity, the cavity does not form a "through passage". Furthermore, Lutz discloses only a single access aperture opening to the longitudinal cavity, whereas Applicant's invention discloses multiple apertures opening to a through passage. With respect to the horizontal cavity, although the cavity appears to extend through the corner member, the passage is not shown to include a stop means for limiting the travel of the frame rail (3) inserted into the passage. Accordingly, Lutz does not disclose access apertures open to a through channel having a stop means for limiting the travel of the frame rail inserted into the channel.

Examiner asserts the wall separating the longitudinal cavity in Lutz from the horizontal cavity functions as a stop for limiting travel of the frame rail (3) inserted into the longitudinal cavity. Applicant contends, however, it is the ends of flange (4) which limit the extent to which frame rail (3) can be inserted into corner member (1). In particular, Figure 3 of Lutz shows the ends of flange (4) butted up flush with the edge of the corner member (1). Furthermore, the text of Lutz specifies "the purpose of the flange-type reinforcing plate 4 is, on the one hand, so that the point where the clamp socket 2 meets the frame rail 3 with the flange-type reinforcing plate 4 on the top side is flush, and thus the entire bearing surface is planar." See page 3, second paragraph of Lutz translation enclosed herewith. If the end wall of the longitudinal cavity was acting as the stop, as the Examiner suggests, then there would be a gap between the end of flange (4) and the edge of the corner member (1), which would necessarily defeat the expressly stated purpose of having a smooth transition between corner member (1) and side rails (3). Accordingly, Applicant respectfully submits that the end wall of the longitudinal cavity does not act as a stop, but rather, it is the contact between flange (4) and the edge of corner member (1) that controls how far side rail (3) may be inserted into the corner member.

Regarding claim 17, none of the cited references, taken individually or in any permissible combination, teach or suggest an assembled member having an exposed upper surface with a raised lip traversing a width of a center portion of the assembled member. In contrast, Lutz merely discloses a corner member (1) having a raised lip (8) positioned along an outside edge of the corner member. The lip (8) does not traverse a center portion of the corner member (1). Accordingly, the cited references do not anticipate or suggest Applicant's claimed invention.

For the above reasons, Applicant respectfully requests reconsideration of the Examiner's rejection of claims 1-20 as being unpatentable over Lutz under 35 USC § 103(a).

Claims 10, 15, 16 and 18 stand rejected under 35 USC § 103(a) as being unpatentable over Lutz (DE 38 15 990) in view of Liu (U.S. Patent No. 5,695,205), and further in view of Roby et al. (U.S. Patent No. 4,077,644). The

Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide reinforcing dowels as taught by Roby and hollow out an interior portion of the corner members of Lutz for the purpose of providing support which adequately accommodates threaded fasteners. It is respectfully submitted that none of the cited references, taken individually or in any permissible combination, anticipate, teach, or suggest an upper element having an exposed surface with apertures for receiving bolts, the apertures extending into integral dowels formed on the interior surface of the upper element. More specifically, the aperture (35) of Roby that the Examiner references does not extend into an integral dowel formed on the interior surface of adapter block (13). Dowel (30) is an integral part of platform (10), not adapter block (13). Consequently, aperture (35) is not shown to extend into an integral dowel formed on the interior surface of adapter block (13).

Furthermore, there is no suggestion or motivation to combine the cited references as suggest by the Examiner. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. Lutz discloses a corner member (1) having two interior cavities for receiving ends of rails (3). The walls of the cavities include passages for receiving bolts for connecting the upper and lower halves of the corner member together. Since the thickness of the walls is shown to be only marginally larger than the diameter of the passages formed in the walls, there would be no need to modify the corner member to include the hollow portions as disclosed in Roby. Moreover, since the walls are already shown to have minimum thickness necessary to accommodate the bolts, it would not be possible to produce the hollowed-out structure shown in Roby without significantly re-engineering the corner member (1) in Lutz. Accordingly, there is simply no motivation to modify the structure of the corner member of Lutz to achieve the hollowed-out structure disclosed in Roby.

For the above reasons Applicant respectfully requests reconsideration of the Examiner's rejection of claims 10, 15, 16, 18, and 12-14 under 35 USC § 103(a).

It is respectfully submitted that this Amendment traverses and

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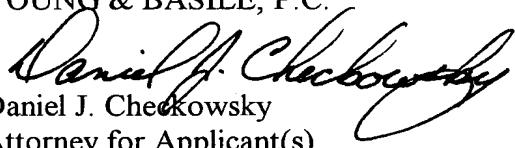
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overcomes all of the Examiner's objections and rejections to the application as originally filed. It is further submitted that this Amendment has antecedent basis in the application as originally filed, including the specification, claims and drawings, and that this Amendment does not add any new subject matter to the application. Reconsideration of the application as amended is requested. It is respectfully submitted that this Amendment places the application in suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicant's attorney at the telephone number listed below.

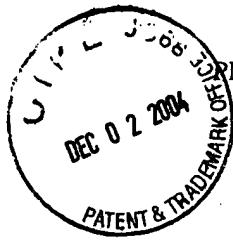
Respectfully submitted,

YOUNG & BASILE, P.C.


Daniel J. Checkowsky
Attorney for Applicant(s)
Registration No. 51,549
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

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CRMP-204-A

CERTIFICATION

To whom it may concern:

This is to certify that the attached translation from German into English is an accurate representation of the document translated by the undersigned. This document is designated as:

Patent for: **TRANSPORTER TROLLEY FRAME WITH CASTORS**

The undersigned declares that he is fluent in German and standard North American English and qualified to translate and attests to the following:

"To the best of my knowledge, the accompanying text is a true, full and accurate translation of the specified document."

Ian Findlay

Date: February 9, 2004



What Is Claimed Is:

1. Frame-type transporter with a castor mounted at each corner, of which at least two are steerable, characterized in that corner pieces (1) configured as clamp sockets (2) are located at each corner of the frame which carry the castors and can be rigidly secured to the two adjacent frame side rails (3).
2. Transporter in accordance with claim 1, wherein the frame side rails (3) lie in one plane.
3. Transporter in accordance with claim 2, wherein (3) a reinforcing plate (4) matching the wall thickness of the clamp sockets (2) is attached on the upper side of the frame side rails to form a termination flush with the upper side of the corner pieces (1).
4. Transporter in accordance with claim 3, wherein the reinforcing plate (4) overlaps on at least one side in the manner of a flange.
5. Transporter in accordance with at least one of the claims 1 to 4, wherein the corner pieces (1) are configured as double-walled clamp sockets.
6. Transporter in accordance with claim 5, wherein the clamp socket is divided horizontally.
7. Transporter in accordance with at least one of the claims 1 to 6, wherein support flanges (8) standing perpendicular to the surface are located in the area of a corner on the top side of the clamp socket (2).
8. Transporter in accordance with at least one of the claims 1 to 7, wherein a depression (10) is located on the top side of the upper clamp half (6) to partially receive a castor of the corner piece (1).

Description

The application relates to a frame-type transporter in accordance with the preamble of claim 1.

Transporters currently in use, as they are known from workshop or warehouse equipment, have a rigid, non-variable usable surface.

Consequently, as a result of the differences between the goods to be transported (e.g.

size), it is necessary to maintain a plurality of conventional transporters.

The object of the invention is a design which reduces the number of transporters needed and thus reduces purchasing costs and minimizes the required storage space.

This object is achieved by the descriptive features of claim 1. A modular system of construction is used.

The advantages achieved by the invention are that the usable surface of these transporters changes, and they can be used to transport different objects safely by using suitable adapters. It should further be noted that the storage space to be set aside for the transporters is reduced to a minimum. Transporters which have not been disassembled can be stacked vertically by means of the depression in combination with the support flanges.

The advantages of this invention enumerated in the preceding paragraph show that these transporters are eminently suitable for use in factories and warehouses.

An embodiment of the invention and various details are shown in the drawings to follow.

Figure 1 shows the modular system for the transporter with its various definitive parts.

Figure 2 shows transporter disassembled to minimize storage space.

Figure 3 shows adapters for transporter to move an engine block.

Figure 4 shows corner piece with support flange, and

Figure 5 shows corner piece with depression.

Figure 1 is a schematic representation of the basic individual parts of the frame-type transporter, consisting of frame side rails 3 and corner pieces 1. The reinforcing plates 4 here are attached in the manner of a flange on both sides to the frame sides rails 3 with the horizontal separation.

The ends of the frame rails are inserted into the openings provided in the corner pieces and rigidly secured.

To this end, the corner piece is constructed as follows.

The basic parts are the clamp socket 2, consisting of lower clamp half 5 and upper clamp half 6, and the castor attached to the lower clamp half 6, said castor being moveable, rigid or adjustable, or a combination of these possibilities.

Holes are located in the upper clamp half so that countersunk internal hex head bolts can be installed to obtain a planar surface. In the lower clamp half 5, the threads for the internal hex head bolts are cut in the sides. The openings in this case are cut square and stand at right angles to each other in the horizontal. When the transporter is assembled, this arrangement ensures the rectangular shape of the transporter, with the frame side rails lying in one plane.

The purpose of the flange-type reinforcing plates 4 is, on the one hand, so that the point where the clamp socket 2 meets the frame side rail 3 with the flange-type reinforcing plate 4 on the top side is flush, and thus the entire bearing surface is planar.

Secondly, the flange-type reinforcing plate 4, as can be seen from Figure 3, provides the potential for transporting an engine by using a suitable adapter 7 which is rigidly clamped to the flanges. In general, the flexibility provided by the various adapters allows the transporter to be used in a great number of areas.

Additional possible configurations for the transporter with respect to the corner pieces are described in what follows in conjunction with Figure 4 and Figure 5. Figure 4 shows a corner largely as described in the preceding, with supporting flanges 8 attached to the clamp socket 2, in this case to the upper clamp half 6, said flanges pointing upward and standing perpendicular to the surface and enclosing an outside corner. Transporters of the same dimensions, if they have not been disassembled and stored as shown in Figure 2, can thereby be stacked vertically to save space without the possibility of their rolling away. In addition, box-shaped objects, such as a wire mesh container, can be transported without the risk of slipping.

Figure 5 similarly shows a corner piece, in this case with a depression 10 on the upper side of the top clamp half 6. This depression 10 is designed such that it can partially receive the castor of another corner piece 1. As with the corner piece with supporting flanges 8, the depression provides safe storage of transporters of the same size.